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EXAMINER
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DESAI, ANISH P

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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03/07/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/799,724	<b>Applicant(s)</b> ANDER ET AL.	
	<b>Examiner</b> ANISH DESAI	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-24, 26-33 and 36-40 is/are pending in the application.
- 4a) Of the above claim(s) 36 and 37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-24, 26-33 and 38-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 1-20, 25, 34, and 35 are cancelled. Claims 21-24, 26-33, and 36-40 are pending. Claims 39 and 40 are new claim. Claims 36 and 37 are withdrawn. Support for amended claims is found in the specification.
2. In view of the present amendment, 35 USC Section 102(b) rejections based on Bonk et al. (US 4,731,273) are withdrawn in favor of 35 USC Section 103(a) rejection. Similar is true with respect to the 35 USC Section 102(b)/103(a) rejections based on Woods (US 4,414,275), Komiyama et al. (US 5,118,567), and Polski et al. (US 5,599,601).
3. The 35 USC Section 103(a) rejections based on Bonk et al. (US 4,731,273) in view of Lautenschlaeger et al. (US 4,814,215) are maintained.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 21, 23, 28, 30, 32, 33, and 38-40 are rejected under 35 U.S.C. 103(a) as obvious over Bonk et al. (US 4,731,273).
5. Regarding claims 21 and 38, Bonk teaches a heat-recoverable closure with a crosslinked pressure-sensitive adhesive (PSA) (abstract) wherein the PSA of Bonk comprises acrylate terpolymer and a crosslinking agent (column 2 line 61 and column 3 line 1). Additionally, the

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PSA of Bonk comprises dimethacrylate (column 5, line 43). As shown in Figure 1 of Bonk, the PSA layer 3 has a three-dimensional structure (length\*width\*height) and the psa layer 2 necessarily has a defined rectangular (quadrangular and polygonal) cross-sectional contour. The PSA layer of Bonk as shown in Figure 1 is in a strip form. Further, Bonk teaches that the PSA tape can be wound upon itself into a roll form for storage or shipment (column 6, lines 19-21). Moreover, the PSA layer as shown in the Figure 1 is presented as a continuous material.

6. With respect to the claim requirement of the thickness of the PSA material or a sealing material, it would have been obvious to choose a suitable thickness depending on the intended use of the PSA material.

7. It is noted that the recitation "material is produced by polymerization of a polymerizable mass comprising at least one compound selected from the group consisting of" is related to a product by process limitation. Note that the product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). In the presently

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claimed invention, the PSA adhesive material or sealing material of Applicant has a 3D structure and a defined cross-sectional contour, wherein the material is present in a form of strings, strands or strips having a round, semicircular, oval, elliptical...irregular cross-sectional contour, and wherein the material is produced by polymerizing a polymerizable compound such as di-(meth)acrylate. Bonk teaches a heat-recoverable closure with a crosslinked pressure-sensitive adhesive (PSA) (abstract). The PSA of Bonk comprises dimethacrylate (column 5, line 43). As shown in the Figure 1 of Bonk, the PSA layer 3 has a 3D structure (length\*width\*height) and a rectangular cross-sectional contour. Thus, the PSA material or a sealing material of Bonk is similar to the Applicant's PSA material or a sealing material.

8. With respect to claim 23, Bonk teaches a polyfunctional acrylate monomer is any compound having two or more acrylate or methacrylate functionalities per molecule (column 5, lines 38-40) and discloses pentaerythritol tetra-acrylate (column 5, line 45).

9. Regarding claim 28, Bonk teaches that addition polymerization is preferably accomplished by the use of a use of a photoinitiator and radiation (e.g. UV). According to Bonk, particular techniques of polymerization are disclosed in US Pat 4,181,752 (column 4, lines 30-37). The US Pat 4,181,752 discloses use of 0.01 to 5 parts of a photoinitiator (column 4, lines 7-8).

10. With respect to claim 30, Bonk teaches that it has been found desirable to incorporate in the adhesive composition reinforcing filler such as metal oxide (column 7, lines 48-53) in the amount of about 2% to about 7% by weight (column 7, lines 59-60).

11. With respect to claim 32, Bonk teaches the adhesive comprising fumed silica (column 7, line 58). The fumed silica is a known pigment (colorant) as evidenced by US 5,229,212. The Us

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5,229,212 discloses “Other additives may include, for example...pigment such as fumed silica...dimethylmaleate.” (column 7, lines 40-48). The fumed silica of Bonk is used in the amount of 2 to 7% by weight (column 7, lines 59-60).

12. Regarding claim 33, Bonk teaches the adhesive comprising a crosslinking agent in an amount of from about 0.8% to about 10% by weight (column 3, lines 7-8).

13. With respect to claim 40, as shown in Figure 1 of Bonk, the PSA layer 3 has a three-dimensional structure (length\*width\*height) and obviously has a defined rectangular (quadrangular and polygonal) cross-sectional contour. Although, Bonk does not explicitly teach the ratio of width to height as claimed, it would have been obvious to choose the suitable ratio of width to height depending on the intended use of the PSA material.

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14. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as obvious over Woods (US 4,414,275).

15. Woods teaches a flexible adhesive tape that can be used as sealants (column 2, lines 53-54). According to Woods, the adhesive composition is based upon one or more acrylate (including methacrylate) monomers generally to the art for adhesive purpose (column 3 lines 67-68 and column 4 lines 1-2). Further the adhesive tape of Woods comprises polymerizable acrylate ester monomers such as isobornyl methacrylate (column 4, lines 60-62). It is noted that Woods discloses that the layers or strips of the tape of his invention are packaged or stored in a stacked fashion (column 7 lines 25-27). To the Examiner, the strips of the adhesive tape (i.e. adhesive layer) of Woods would obviously have a three-dimensional structure (length\*width\*height) and a rectangular (quadrangular and polygonal) cross-sectional contour.

16. As to the recitation “material is produced by polymerization of a polymerizable mass comprising at least one compound selected from the group consisting of”, as previously noted in Section 4, said recitation is related to a product by process limitation and as shown above the product of Wood is similar to Applicant’s pressure-sensitive adhesive material or a sealing material.

17. With respect to claim requirement of the thickness of the PSA material or a sealing material, it would have been obvious to choose a suitable thickness depending on the intended use of the PSA material.

18. Claims 21, 24, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komiyama et al. (US 5,118,567).

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19. With respect to claim 21, Komiyama teaches an adhesive tape comprising an adhesive layer formed on one surface of the base sheet wherein the adhesive layer comprises a (meth)acrylate polymer, an epoxy resin, a photopolymerizable low molecular weight compound, and a heat activable potential curing agent for the epoxy resin and a photopolymerization initiator for the photopolymerizable low molecular weight compound (abstract). The adhesive tape of Komiyama would obviously have a three-dimensional structure and a defined cross-sectional contour. As shown in the Figure 1, the tape of Komiyama is in the form of a strip and would obviously have a rectangular (quadrangular or polygonal) cross-sectional contour. Further, with respect to the limitation of “material is produced by polymerization of a polymerizable mass comprising at least one compound selected from the group consisting of” is related to a product by process limitation as set forth in Section 4 of this Office Action.
20. With respect to claim requirement of the thickness of the PSA material or a sealing material, it would have been obvious to choose a suitable thickness depending on the intended use of the PSA material
21. With respect to claim 24, Komiyama teaches adhesive comprising vinyl acetate (column 3, lines 39-40).
22. With respect to claim 26, Komiyama teaches that examples of epoxy resin include glycidyl ethers of a phenol such as Bisphenol A (column 3, lines 60-63).
23. With regards to claim 27, Komiyama teaches that the (meth) acrylate polymer may be a homopolymer of (meth)acrylate (column 3, lines 31-32). Additionally, Komiyama discloses that the term “(meth)acrylate polymer” used herein is meant polymers primarily (at least 50 mol%) comprising structural units derived from at least one (meth) acrylate i.e. acrylate or methacrylate.



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Examples of the suitable (meth)acrylates include, for example, glycidyl acrylate and methacrylate (column 3, lines 21-27). This disclosure is interpreted as the entire (meth)acrylate polymer can be formed of a structural units derived from glycidyl methacrylate, which reads on the epoxide acrylate is a homopolymer of glycidyl (methacrylate).

24. Claims 21 and 31 are rejected under 35 U.S.C. 103(a) as obvious unpatentable over Polski et al. (US 5,599,601).

25. Polski teaches a disposable tape tab for a diaper with at least a fastening tape tab portion and a release tape tab portion wherein the fastening surface on the fastening tape tab is a PSA (abstract). Further, Polski teaches that the fastening tape and release tape are designed to be supplied as separate tape elements (column 1, lines 5-10). Additionally, Polski teaches an adhesive comprising vinyl ester and styrene (column 4, lines 24-25 and column 5 lines 60-62). With respect to claim limitation of adhesive material having a three-dimensional structure and a defined cross-sectional contour, it is the Examiner's position that the adhesive tape of Polski including the adhesive layer would necessarily have a three-dimensional structure (length\*width\*height) and a defined cross-sectional contour. Figure 5 of Polski discloses an adhesive layer 27 on a substrate surface 6. The adhesive layer 27 as shown in Figure 5 has a rectangular (quadrangular or polygonal) contour and it is in a strip form. Additionally, Polski discloses polymerization of PSA (column 4, lines 11-13 and lines 66-67).

26. As to the recitation "material is produced by polymerization of a polymerizable mass comprising at least one compound selected from the group consisting of", as previously noted

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said recitation is related to a product by process limitation and as shown above the fastening tape tab of Polski is similar to Applicant's pressure-sensitive adhesive material or a sealing material.

27. With respect to claim requirement of the thickness of the PSA material or a sealing material, it would have been obvious to choose a suitable thickness depending on the intended use of the PSA material.

28. With respect to claim 31, Polski teaches that other useful materials such as fire retardants (flame-proofing agent) can be blended into the adhesive matrix (column 5, lines 18-21). It is also noted that the applicant has admitted that the presence of a flame-proofing agent is not claimed to be a feature providing novelty to the 3D PSA system of the present invention (see pages 12-13 of 03/01/07 amendment). Polski teaches addition of flame proofing agent in the adhesive except for the amount of flame proofing agent, however since the general conditions of the claims are disclosed by Polski; namely Polski teaches a PSA material comprising vinyl ester and styrene wherein fire retardants can be blended into the adhesive, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the amount of flame-proofing agent in the adhesive layer, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art (In re Aller, 105 USPQ 233).

29. Claims 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bonk et al. (US 4,731,273) in view of Lautenschlaeger et al. (US 4,814,215).

30. The invention of Bonk is previously disclosed. Bonk discloses use of a radiation-sensitive initiator but Bonk is silent with respect to teaching of a radiation-sensitive initiator as

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instantly claimed. However, Lautenschlaeger discloses an adhesive composition, process and product. Further, Lautenschlaeger discloses that various mastic products, for example, sealants and preformed tapes and strips are known for mounting window glass (column 1, lines 37-39). Moreover, Lautenschlaeger discloses that photo-initiators are used to increase the rate of cure in the case of cure by UV radiation (column 11, lines 42-43). Further, Lautenschlaeger discloses typical examples of photoinitiators such as Irgacure 184 (1-hydroxy-cyclohexyl-phenyl-ketone) (column 11, lines 47-48). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose a suitable photoinitiator from the examples of photoinitiators provided by Lautenschlaeger in the adhesive of Bonk, because selecting a known compound to meet known requirements involves routine skill in the art.

### ***Response to Arguments***

31. Applicant's arguments filed on 01/16/08 have been fully considered but they are not found persuasive.

32. It is noted that with respect to the art rejections based on Bonk et al. (US 4,731,273), Woods (US 4,414,275), Komiyama et al. (US 5,118,567), Polski et al. (US 5,599,601), and Bonk et al. in view of Lautenschlaeger et al. (US 4,814,215), Applicant has generally argued that the references cited by the Examiner neither teach nor indicate that the PSA is manufactured in a form of strings, strands, or strips having a round, semicircular, oval, elliptical, triangular, quadrangular, polygonal or irregular cross-sectional contour and a thickness of 0.5 to 50 mm. The Examiner respectfully disagrees for the following reasons:

33. Regarding the art rejections based on Bonk (US 4,731,273), the PSA layer 3 as shown in Figure 1 of Bonk has clearly a three-dimensional structure (length\*width\*height), and the psa of Bonk obviously has a defined cross-sectional contour. Further, if one were to examine the cross-sectional contour of this PSA, it would be a rectangular, which would read on quadrangular and polygonal cross-sectional contour as claimed. As to the broadly claimed requirement of the shape of the PSA material or sealing material in the form of "strings, strands, or strips" as shown in Figure 1 of Bonk, the psa layer of Bonk is in the form of a strip. Further as to the thickness requirement, choosing a thickness of the psa material or sealing material is determined by its workable ranges with too thin not providing a sufficient bond and too thick impairing the performance of the strip and thus would be obvious depending on its intended use.

34. With respect to the art rejections based on Woods (US 4,414,275): according to Woods "Any solvent in the adhesive coating is then allowed to evaporate...when the tape is wound into a spiral roll, or to adjoining tapes if layers or **strips** of tape are packaged or stored in a stacked fashion" (column 7 lines 20-26). Woods does not explicitly teach that the strips of his tape inherently has a 3D structure and a cross-sectional contour, however it is unavoidable that a strip of adhesive as taught by Wood would necessarily have a 3D structure (length\*width\*height) and a rectangular (quadrangular and polygonal) cross-sectional contour. With respect to the thickness requirement, choosing a thickness of the psa material or sealing material would be obvious depending on its intended use.

35. With respect to the art rejections based on Komiyama et al. (US 5,118,567), as shown in the Figure 1, the tape of Komiyama is in the form of a strip and would obviously have a rectangular (quadrangular or polygonal) cross-sectional contour. As to the thickness limitation,

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choosing a thickness of the psa material or sealing material would be obvious depending on its end use.

36. Regarding the art rejections based on Polski et al. (US 5,599,601), Figure 5 of Polski discloses an adhesive layer 27 on a substrate surface 6. The adhesive layer 27 as shown in Figure 5 has a rectangular (quadrangular or polygonal) contour and it is in a strip form. As to the thickness requirement, choosing a thickness of the psa material or sealing material would be obvious depending on its intended use.

37. With respect to the art rejections based on Bonk in view of Lautenschlaeger et al. (US 4,814,215), as stated previously Bonk reference is relied upon to disclose the claim limitations of 3D structure and a defined cross-sectional contour, shape of the adhesive or sealing material (strings, strands, strips etc.), and cross-sectional contour (e.g. quadrangular or polygonal). The secondary reference of Lautenschlaeger is relied upon to disclose a radiation sensitive initiator as claimed in the Markush group of claim 29. Accordingly, the art rejections are maintained.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./  
APD

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